CHAPTER 4
ACQUISITION OF IETMS

4.1 Introduction

The general philosophy of IETM acquisition is to procure, as a minimum, a Class II IETM in a format such as SGML or Indexed PDF. (Refer to Appendix A for detailed information about SGML and PDF.) The preferred option is to procure standard SGML-tagged IETM data that are optimally structured to create survivable data in revisable and economically maintained databases by sharing common objects. This philosophy is a key element in the migration toward the DoD's Integrated Data Environment (IDE). The IDE is a dynamic data environment in which all users draw from a common virtual database that contains data maintained by an unlimited number of Government or commercial service providers. A shared information environment, providing immediate access to digital data, supports the IDE. An IETM may also be procured as a logistic support product under a major weapon system or equipment buy -- as a separate item under its own contract to support new equipment, or as a conversion.

4.2 IETM Acquisition Process Phases

Figure 4-1 shows the general phases involved in the IETM acquisition process.

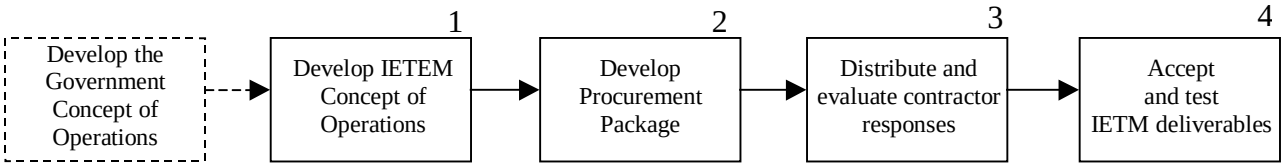

Figure 4-1. IETM Acquisition Phases

Criteria for the digital data infrastructure and implementation strategy of an acquisition program are included in the Government Concept of Operations (GCO). This document is a necessary precursor for the subsequent phases of IETM development. Both the GCO and the CONOPS (referred to below) are presented in detail in the next chapter.

4.2.1 Phase 1: Develop an IETM Concept of Operations (CONOPS)

Chapter 5 discusses the IETM CONOPS in detail. The document provides potential offerors with anticipated IETM support requirements of the proposed system. Users and the issuing program can evaluate the proposed IETM solutions against the support requirements. The CONOPS provides a common language, set of assumptions, and point-of-departure for all Government and contractor participants in the process. It assists the program in ensuring that needed IETM resources are in place, or that deficiencies are identified.

Even with new acquisitions, much of the technical data supporting the system already exists. The program decision to convert this data (usually to a standard digital format) involves a commitment of resources to accomplish one or more objectives to reduce costs and improve

availability, productivity and quality. However, each of the Services is either involved in, or has completed major conversion efforts, that have involved digitization of existing TMs. Many of these are Class II IETMs in the form of Indexed PDF files or linearly-structured SGML files. Prior to deciding to convert data, the Program Manager needs to determine whether the data has already been converted as part of these digitization efforts. The decision on the type of IETM to select is critical. Selection impacts cost of conversion; available functionality ability to maintain and update data; ability to interface and interact with other data files; and the ability, cost, and effort to migrate in the future to newer technology. A functionality decision model is presented in Figure 5-2 to assist the Program Manager in selecting the best conversion model for his or her program. Development of an IETM CONOPS is a critical first step in establishing the conditions within, and under which, the IETM will be expected to function. The act of preparing the CONOPS should raise and clarify issues and establish parameters. It is important to document the conditions and assumptions used to make the IETM selection decision and to help formulate an implementation strategy.

4.2.2 Phase 2: Develop Procurement Package

The IETM procurement process varies between Services. However, there is agreement that an IETM CONOPS must be developed prior to solicitation to ensure programs have properly planned for IETM definition, implementation, and ongoing maintenance. Upon development of a program-specific IETM CONOPS, the Program Office will follow procurement guidance for its service.

4.2.2.1 Sample List of IETM Deliverables

The list of deliverables will vary depending on the Class of IETM being acquired. The following is provided as guidance only, and is not intended to be a complete or approved list:

a. Technical Manual Schedules and Status Reports. In-Process Reviews (IPRs) should be held at the 30, 75, and 100 percent completion milestones to ensure all parties have a common understanding of the final product.
b. Outline Book Plan or equivalent (will apply to either the hard-copy TM or IETM and defines the content and the structure of the TM).
c. Quality Assurance Program Plan.
d. Software Development Plan. This plan should specify all software, including the utilities procured or developed to convert, develop, test or verify the IETM being delivered. Examples of software include conversion filters, Java applets, or ActiveX controls that increase IETM functionality -- and helper applications that may connect the IETM to training modules.
e. The DTD (as accepted) and its final SGML tagged file, including:

   - Graphic images in MIL-PRF-28002 Raster

   - or -

   - Graphic images in conformance with MIL-PRF-28000 IGES

- or -

- MIL-PRF-28003 Computer Graphic Metafile (CGM) series of performance specifications (note: audio, video, Expert Systems, and other externally-linked files used within the Class IIIII IETM, or these same file types found within Class IV or V IETMs, are delivered in the runtime version of the IETM, as noted in item (h) below).

f. Any graphics that exist in vector format (vendor format).
g. Source publishing system file (vendor format) if other than that as described in item (e) above. This could be a Microsoft Word, Interleaf or PageMaker file.
h. Runtime version of the IETM. The file that has been processed through the IETM application software that would reside on media to be viewed by the user. This is to include all linked files in their compiled runtime format. This deliverable is not required if the runtime version is the same SGML used as described in item (e).
i. CD in accordance with the SOW.
j. Hard-copy fold-outs bound in a Supplemental Manual (if required).
k. Audio and video materials in mutually accepted formats and media. Popular file formats for video are .AVI and .MOV; animation files are typically .FLI or .FLC; audio files are either .WAV or .MID.
l. A PDF file (only for those IETMs that are able to provide hard-copy products for distribution).
m. Contractor IETM cost data.
n. Configuration Management Plan for the software and/or the data, as necessary.
o. Software Licensing Costs (for distribution in the user environment).

4.2.3 Phase 3: Distribute Procurement Package and Evaluate Contractor Response

Figure 4-2, the IETM Acquisition Process Model, illustrates the process of distributing an RFP and evaluating contractors' IETM proposals. The figure also illustrates what the Government and contractor must provide in the acquisition of IETMs.

The IETM Acquisition Process Model below contains two acquisition process scenarios. Steps 1 through 6 plus 16 and 17 identify the process of acquiring an IETM only. Steps 1 through 17 identify the overall IETM acquisition process when it is included as part of a larger system procurement.

Step 1: An IETM CONOPS is developed by conducting a data call in accordance with DoD 5010.12M during the acquisition planning process. The data call is used to gather and define the IETM requirements from the appropriate Logistic Managers. Note that the IETM CONOPS will include a list (including the scope) of all relevant software licensed for use by the program. It will also require that the contractor stipulates the software packages selected and the anticipated total costs, including procurement of additional licenses for Government technical management, reviewing activities, and users. Note also that IETM requirements are a small portion of the total system Request for Proposal (RFP) (refer to Chapter 5 for more information on IETM CONOPS.)

Step 2: The RFP and IETM CONOPS are released to bidders.

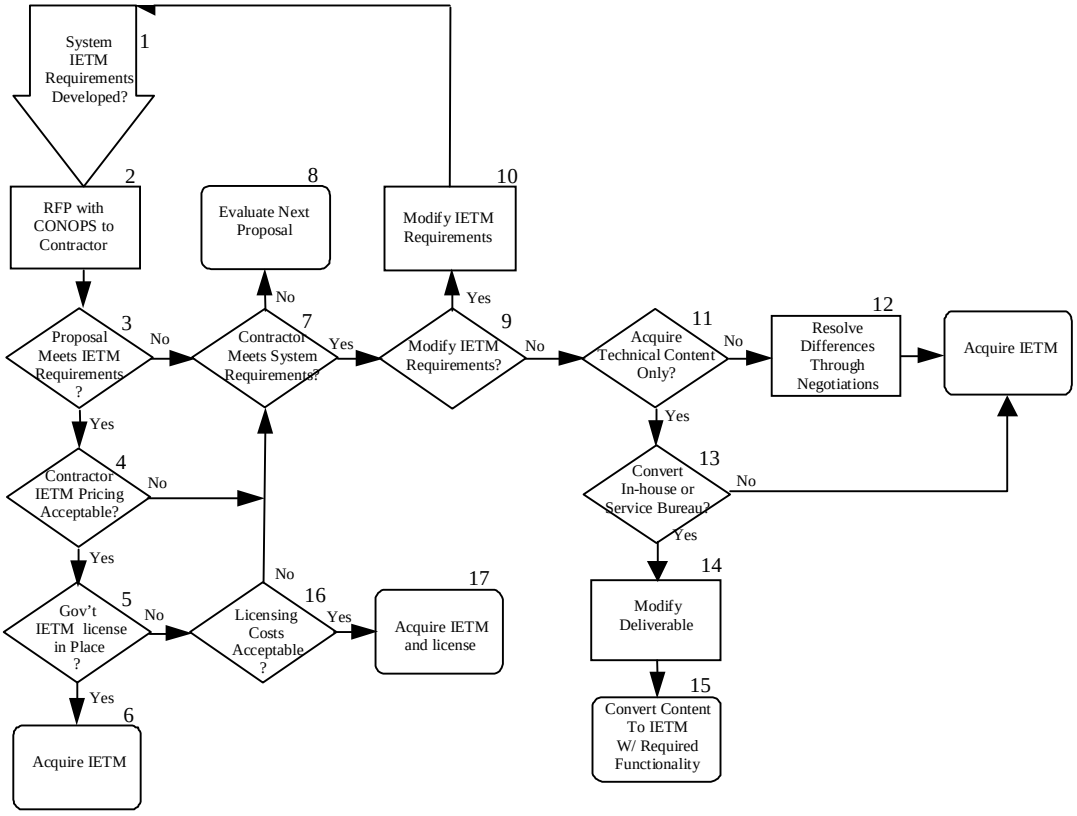

Figure 4-2. IETM Acquisition Process Model

Step 3: Contractors' proposals are received and evaluated against the IETM requirements.

Step 4: If a contractor's proposal meets all IETM functional requirements, determine whether the IETM development costs are acceptable.

Step 5: If proposed IETM costs are acceptable, determine whether the contractor has committed to using IETM software that is currently licensed to the program. The contractor may select IETM development software currently licensed by the program or by a specific Service. If not, the contractor shall determine and acknowledge the costs to the program to obtain appropriate licenses for the contractor's selected IETM software. This should specify costs for acquisition and life-cycle use by users identified in the IETM CONOPS.

Step 6: Acquire the IETM.

Step 7: The program must evaluate whether the contractor satisfies minimum hardware system requirements prior to proceeding further within these steps.

Step 8: If the contractor does not satisfy proposed system requirements, note this appropriately and evaluate the next proposal.

Step 9: If the contractor does not satisfy IETM requirements, but does meet system requirements, the program may consider whether IETM requirements are reasonable and justified -- or warrant modification.

Step 10: If the IETM requirements are to be changed, modify the RFP to incorporate the new IETM requirements with a modified CONOPS and distribute to the bidders.

Step 11: If negotiations fail to identify an acceptable IETM solution, the program can decide to acquire only the technical content in a non-IETM format.

Step 12: If the IETM requirements are not met and "technical content only" is not desired, resolve any differences through negotiations.

Step 13: If in-house or Service Bureau conversion of content into the required IETM is not desired, the contractor proposed IETM should be acquired.

Step 14: The program must delete the IETM runtime and possibly modify the other deliverables. If these delivery requirements are dropped, the contractor will be responsible for developing and delivering the technical content and providing the source and SGML files, but not developing the IETM end product.

Step 15: Once the content is acquired by the program, it can be converted (in-house or by Service Bureaus) into an IETM having the required functionality. SGML should be the data format in which the content is received. If not, both program and contractor should mutually agree to the format.

Step 16: Determine whether the IETM software licensing costs are acceptable, and whether the software contractor's proposal meets program needs or provides significant features beyond those IETM tools currently in use; endorse the request to procure the IETM software.

Step 17: Acquire IETM and IETM software license. Acknowledge new IETM software licensing with appropriate Licensing Coordinator as identified in Appendices D, E, F or G. The central tracking of the various IETM software packages used throughout the Service can assist in achieving economies of scale with IETM vendors as well as helping identify what IETM software may be available to the program at no charge.

4.3 Phase 4: Acceptance and Testing of IETM Products

The TMCR describes the QA responsibilities of the acquiring program and of the contractor preparing the IETM. Included in the TMCR are the detailed descriptions of the QA products and processes to be performed in developing and accepting an IETM deliverable. Verify that the contractor has met all of the IETM functionality requirements through IPRs up to and including the final deliverable. Representatives from the user community (sailors, mechanics, technicians, subject matter experts) should be invited to review the product. Engaging the user throughout the IETM development process provides ample time for IETM product improvement.